

IN THE CLAIMS

Upon entry of the present amendment, the status of the claims will be as is shown below. This listing of claims replaces all previous versions and listings of claims in the present application.

Claims 1-19 (Cancelled)

20. (New) A base station apparatus having a wireless interface and a cable interface and relaying communications between a mobile terminal apparatus and the internet, the base station apparatus comprising:

a protocol relay section that performs proxy processing;

a protocol processing section that performs normal protocol processing and relay processing without involving proxy processing;

a first output destination controller that detects an instruction from the mobile terminal apparatus from a relay packet, selects one of the protocol relay section and the protocol processing section in accordance with the detected instruction, and instructs packet processing to the mobile terminal apparatus.

21. (New) The base station apparatus of claim 20, wherein the instruction from the mobile terminal apparatus is described in an upper transfer field in a header of the relay packet.

22. (New) The base station apparatus of claim 21, wherein the header of the relay packet is associated with a layer 2.

23. (New) The base station apparatus of claim 20,  
wherein the protocol relay section performs proxy processing on a  
transport layer, and  
wherein the protocol processing section performs protocol processing on a  
network layer.

24. (New) The base station apparatus of claim 20,  
wherein the protocol relay section performs proxy processing on at least  
one of a transport layer and a network layer, and  
wherein the protocol processing section performs protocol processing on a  
data link layer.

25. (New) The base station apparatus of claim 20, further comprising:  
an L2 relay section that performs relay processing on a data link layer;  
and  
a second output destination controller that selects one of transfer to the L2  
relay section and transfer to an upper layer corresponding to a type of the relay  
packet,  
wherein, when the second output destination controller selects transfer to  
the upper layer, the first output destination controller selects one of the protocol  
relay section and the protocol processing section in accordance with the detected  
instruction.

26. (New) A mobile terminal apparatus comprising:  
a header setting section that adds to a header an instruction for relaying the relay packet to the base station apparatus of claim 20 on a layer; and  
a wireless communication section that transmits the relay packet including the header.

27. (New) The mobile terminal apparatus of claim 26, wherein the instruction for the layer for packet relay processing instructs a relay on a data link layer.

28. (New) The mobile terminal apparatus of claim 26, wherein the instruction for the layer for packet relay processing instructs a relay on a transport layer.

29. (New) The mobile terminal apparatus of claim 26, wherein the instruction for the layer for the packet relay processing is described in an upper transfer field in the header.

30. (New) A wireless access system comprising a mobile terminal apparatus and a base station apparatus that relays communications between the mobile terminal apparatus and the internet,  
the mobile terminal apparatus comprising:

a header setting section that adds to a header an instruction for relaying a relay packet on a layer; and

a wireless communication section that transmits a relay packet including the header,

the base station apparatus comprising:

a protocol relay section that performs proxy processing;

a protocol processing section that performs normal protocol processing and relay processing without involving proxy processing; and

an output destination controller that selects one of the protocol relay section and the protocol processing section based on the instruction described in the header of the relay packet, and instructs packet processing to the mobile terminal apparatus.